

What is claimed is:

1. A method of applying an image processing onto two dimensionally-arranged image data representing a captured image including a main captured-subject and producing image signals to reproduce the captured image visually with one of various reproduction sizes on one of various kinds of recording media, comprising:

a reproduction size determining step of determining a reproduction size of the captured image to be reproduced visually on a recording medium;

a subject size determining step of determining a size of the main captured-subject on the determined reproduction size of the captured image;

an image processing content determining step of determining a content of the image processing on the basis of the determined reproduction size of the captured image and the determined size of the main captured-subject; and

a processing step of applying the image processing with the determined content onto the two dimensionally-arranged image data and producing image signals to reproduce the captured image visually with the determined reproduction size on the recording medium.

2. The method of claim 1, wherein the image processing content determining step determines the content of the image processing based on an angle of field to represent the size of the main captured-subject in a visual image reproduced on the recording medium on a basis of a viewing position when viewing the visual image.

3. The method of claim 1, wherein the subject size determining step estimates the size of the main captured-subject on a basis of the determined reproduction size of the captured image and determines the size of the main captured-subject.

4. The method of claim 1, wherein the subject size determining step obtains an occupying ratio of the main captured-subject on the captured image and determines the size of the main captured-subject on the basis of the obtained occupying ratio.

5. The method of claim 4, wherein the two dimensionally-arranged image data are provided with additional data including size information and the subject size determining

step obtains the occupying ratio from the size information of the additional data.

6. The method of claim 1, wherein the two dimensionally-arranged image data are provided with additional data including photographing information and the subject size determining step estimates an occupying ratio of the main captured-subject on the captured image from the photographing information of the additional data and determines the size of the main captured-subject on the basis of the estimated occupying ratio.

7. The method of claim 6, wherein the photographing information includes at least one of a subject area, a type of a photographed scene, a subject distance and a detection of reflected strobe light.

8. The method of claim 6, wherein the subject size determining step estimates an occupying ratio of the main captured-subject on the captured image from the two dimensionally-arranged image data and determines the size of the main captured-subject on the basis of the estimated occupying ratio.

9. The method of claim 1, further comprising:

a processing tendency obtaining step of obtaining a tendency of the image processing applied when the image signals representing the captured image are produced; and

a correcting step of correcting an extent of the image processing on the basis of the tendency of the image processing obtained by the processing tendency obtaining step.

10. The method of claim 9, wherein the tendency of the image processing obtained by the processing tendency obtaining step includes at least one of a contrast processing, a sharpness processing, a granularity processing, and a chroma processing which is applied when the image signals representing the captured image are produced.

11. The method of claim 10, wherein the correcting step corrects the extent of the image processing with the consideration for duplication or reciprocity for the image processing applied when the image signals representing the captured image are produced.

12. The method of claim 10, wherein the two dimensionally-arranged image data are provided with additional data and the processing tendency obtaining step obtains the tendency of the image processing from the additional data.
13. The method of claim 1, further comprising:
a preference tendency obtaining step of obtaining a preference tendency of a user; and
a correcting step of correcting an extent of the image processing on the basis of the preference tendency of the user obtained by the processing tendency obtaining step.
14. The method of claim 13, wherein the preference tendency obtaining step obtains information regarding at least one of a type of a photographing device, a number of photographing pixels, an exposing mode and a white balance and obtains the preference tendency of the user from the obtained information.
15. The method of claim 13, wherein the two dimensionally-arranged image data are provided with additional data and the preference tendency obtaining step obtains the preference tendency of the user from the additional data.

16. The method of claim 2, wherein the image processing content determining step determines the content of the image processing in accordance with whether or not the angle of field is a reference field angle or less.

17. The method of claim 16, wherein when the angle of field is smaller than the reference field angle, the image processing content determining step increases the contrast more.

18. The method of claim 17, wherein when the angle of field is smaller than the reference field angle, the image processing content determining step increases the contrast by 5% or more.

19. The method of claim 16, wherein when the angle of field is larger than the reference field angle, the image processing content determining step decreases the contrast less.

20. The method of claim 19, wherein when the angle of field is larger than the reference field angle, the image

processing content determining step decreases the contrast by 5% or less.

21. The method of claim 16, wherein when the angle of field is smaller than the reference field angle, the smaller the angle of field is, the more an edge enhancement processing or a high frequency component enhancement processing is applied.

22. The method of claim 16, wherein when the angle of field is larger than the reference field angle, the larger the angle of field is, the more a granular noise eliminating processing or an intermediate frequency component reflecting processing is applied.

23. The method of claim 16, wherein when the angle of field is smaller than the reference field angle, the smaller the angle of field is, the more a chroma enhancement processing or a high frequency component enhancement processing is applied.

24. The method of claim 16, wherein when the angle of field is larger than the reference field angle, the larger the angle of field is, the more a chroma enhancement processing

or a high frequency component enhancement processing is applied.

25. The method of claim 16, wherein the reference field angle is 10° .

26. The method of claim 1, wherein the image processing method produces visual image-referred data of output image signals by conducting the image processing for the captured-image data outputted from the image capturing device so as to optimize a visual image formation on an output medium.

27. The method of claim 26, wherein the captured-image data outputted from the image capturing device are scene-referred image data.

28. The method of claim 26, wherein the captured-image data outputted from the image capturing device are scene-referred raw data.

29. The method of claim 26, wherein the captured-image data outputted from the image capturing device are visual image-referred data.

30. A readable product from which a program representing an image processing method is read, the image processing method is a method of applying an image processing onto two dimensionally-arranged image data representing a captured image including a main captured-subject and producing image signals to reproduce the captured image visually with one of various reproduction sizes on one of various kinds of recording media, comprising:

a reproduction size determining step of determining a reproduction size of the captured image to be reproduced visually on a recording medium;

a subject size determining step of determining a size of the main captured-subject on the determined reproduction size of the captured image;

an image processing content determining step of changing a content of the image processing on the basis of the determined reproduction size of the captured image and the determined size of the main captured-subject; and

a processing step of applying the image processing with the determined content onto the two dimensionally-arranged image data and producing image signals to reproduce the

captured image visually with the determined reproduction size on the recording medium.

31. The readable product of claim 30, wherein the image processing content determining step estimates an angle of field for the main captured-subject from a viewing distance to observe the captured image reproduced with the determined reproduction size and changes the content of the image processing on the basis of the estimated angle of field for the main captured-subject.

32. The readable product of claim 30, wherein the two dimensionally-arranged image data are provided with additional data including size information and the subject size determining step obtains the occupying ratio from the size information of the additional data.

33. The readable product of claim 30, wherein the two dimensionally-arranged image data are provided with additional data including photographing information and the subject size determining step estimates an occupying ratio of the main captured-subject on the captured image from the photographing information of the additional data and

determines the size of the main captured-subject on the basis of the estimated occupying ratio.

34. The readable product of claim 30, wherein the subject size determining step estimates an occupying ratio of the main captured-subject on the captured image from the two dimensionally-arranged image data and determines the size of the main captured-subject on the basis of the estimated occupying ratio.

35. The readable product of claim 30, further comprising:
a processing tendency obtaining step of obtaining a tendency of the image processing applied when the image signals representing the captured image are produced; and
a correcting step of correcting an extent of the image processing on the basis of the tendency of the image processing obtained by the processing tendency obtaining step.

36. The readable product of claim 30, further comprising:
a preference tendency obtaining step of obtaining a preference tendency of a user; and

a correcting step of correcting an extent of the image processing on the basis of the preference tendency of the user obtained by the processing tendency obtaining step.

37. An apparatus for applying an image processing onto two dimensionally-arranged image data representing a captured image including a main captured-subject and producing image signals to reproduce the captured image visually with one of various reproduction sizes on one of various kinds of recording media, comprising:

a reproduction size determining section for determining a reproduction size of the captured image to be reproduced visually on a recording medium;

a subject size determining section for determining a size of the main captured-subject on the determined reproduction size of the captured image;

an image processing content changing section for changing a content of the image processing on the basis of the determined reproduction size of the captured image and the determined size of the main captured-subject; and

a processing section for applying the image processing with the determined content onto the two dimensionally-arranged image data and producing image signals to reproduce

the captured image visually with the determined reproduction size on the recording medium.

38. The apparatus of claim 37, wherein the subject size determining section obtains an occupying ratio of the main captured-subject on the captured image and determines the size of the main captured-subject on the basis of the obtained occupying ratio.

39. The apparatus of claim 38, wherein the two dimensionally-arranged image data are provided with additional data including size information and the subject size determining section obtains the occupying ratio from the size information of the additional data.

40. The apparatus of claim 38, wherein the two dimensionally-arranged image data are provided with additional data including photographing information and the subject size determining section estimates an occupying ratio of the main captured-subject on the captured image from the photographing information of the additional data and determines the size of the main captured-subject on the basis of the estimated occupying ratio.

41. The apparatus of claim 37, further comprising:

a processing tendency obtaining section for obtaining a tendency of the image processing applied when the image signals representing the captured image are produced; and

a correcting section for correcting an extent of the image processing on the basis of the tendency of the image processing obtained by the processing tendency obtaining section.

42. The apparatus of claim 37, further comprising:

a preference tendency obtaining section for obtaining a preference tendency of a user; and

a correcting section for correcting an extent of the image processing on the basis of the preference tendency of the user obtained by the processing tendency obtaining step.